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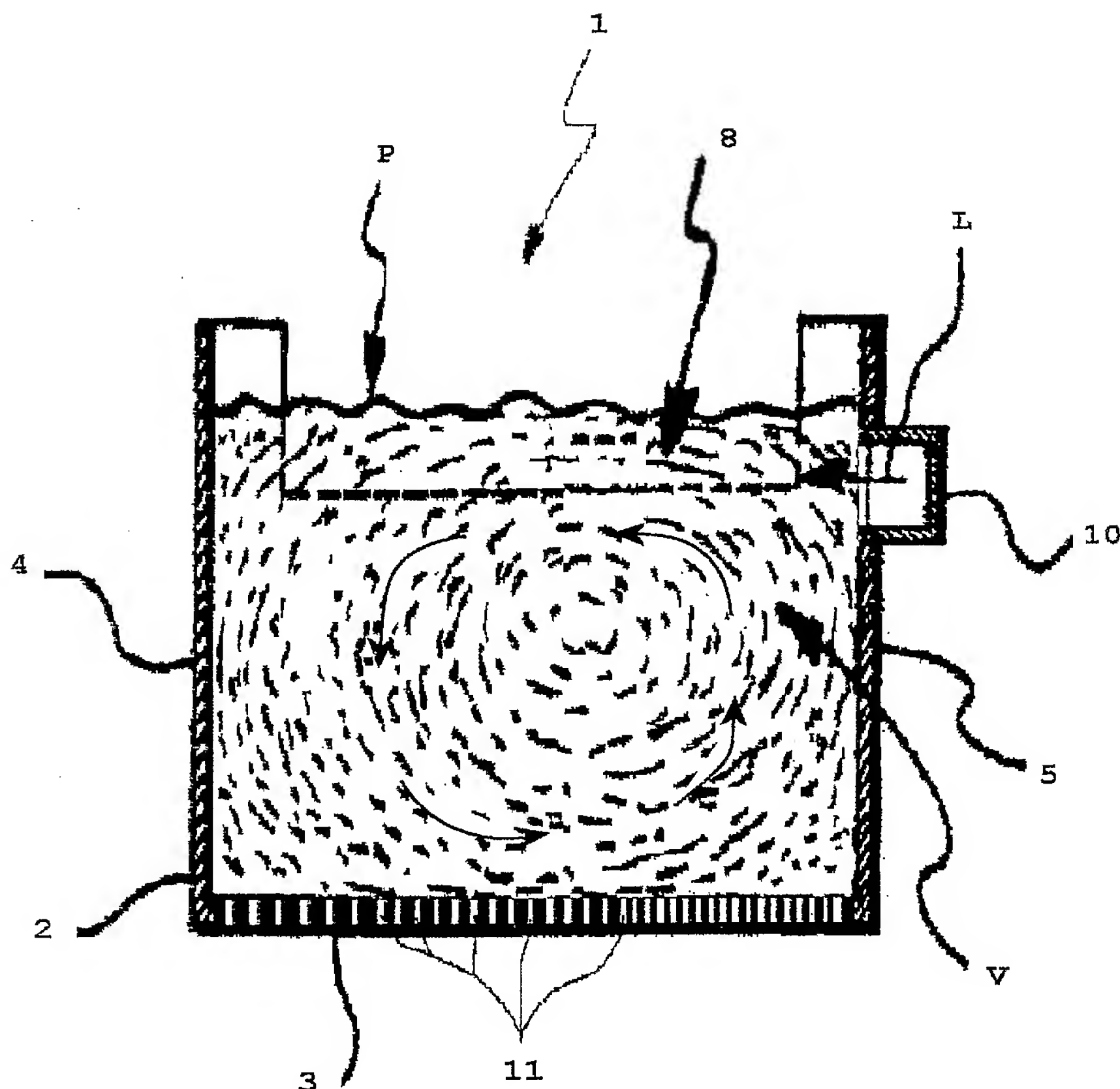
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— with international search report

[Continued on next page]

(54) Title: FLUID BED GRANULATION PROCESS AND APPARATUS



(57) Abstract: A fluid bed granulation process of a predetermined substance comprises the steps of: forming, through a fluidification, air flow of predetermined flow rate, a fluid bed of granules of said substance to be granulated fed to it in the form of seeds, - feeding said fluid bed with a continuous flow of a growth substance (or liquid).



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INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP2005/001950

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 B01J2/16 B01J8/44

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 B01J

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 02/100527 A (HUETTLIN HERBERT) 19 December 2002 (2002-12-19) page 19, last paragraph page 20; claim 1; figure 2 -----	1-8
X	WO 02/36256 A (HUETTLIN HERBERT) 10 May 2002 (2002-05-10) page 18 - page 19; claim 1; figure 7 -----	1-8
X	PATENT ABSTRACTS OF JAPAN vol. 1996, no. 02, 29 February 1996 (1996-02-29) -& JP 07 265683 A (FREUNT IND CO LTD; others: 01), 17 October 1995 (1995-10-17) abstract ----- -/--	9-12, 15-18

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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"A" document defining the general state of the art which is not considered to be of particular relevance
"E" earlier document but published on or after the international filing date
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"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
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Date of the actual completion of the international search

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP2005/001950

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 4 033 555 A (FONG ET AL) 5 July 1977 (1977-07-05) column 6, line 17 - line 50 figures 12,13 -----	12,15,18
X	PATENT ABSTRACTS OF JAPAN vol. 010, no. 321 (C-382), 31 October 1986 (1986-10-31) & JP 61 133132 A (OKAWARA MFG CO LTD), 20 June 1986 (1986-06-20) abstract -& DATABASE WPI Section Ch, Week 198631 Derwent Publications Ltd., London, GB; Class J02, AN 1986-200928 XP002350355 & JP 61 133132 A (OKAWARA MFG CO LTD) 20 June 1986 (1986-06-20) abstract -----	12,15,18
A	US 6 338 303 B1 (ZOELLNER JOBST O. A) 15 January 2002 (2002-01-15) claims 1-3; figure 1 -----	9-11, 15-17

INTERNATIONAL SEARCH REPORT

International application No.
PCT/EP2005/001950

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☒ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
1-12, 15(part), 16-18
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-8

Process for granulating a substance using a fluid bed, wherein the particles within the bed are moved following a circular movement caused by the fluidizing air.

2. claims: 9,10,11,15(partially),16,17

Fluid bed suitable for granulation provided with a rectangular fluidization grid having holes distributed with increasing density or pitch from a wall towards the opposite wall of the bed.

3. claims: 12,15(partially),18

Fluid bed suitable for granulation provided with a rectangular fluidization grid having holes uniformly distributed, wherein the diameter of the holes gradually increases towards one of the walls of the bed.

4. claims: 13,15(partially),19

Fluid bed suitable for granulation provided with a rectangular fluidization grid having holes all equally inclined to the horizontal.

5. claims: 14,15(partially),20

Fluid bed suitable for granulation provided with a rectangular fluidization grid having holes with deflectors, wherein the deflectors are located at the holes and inclined towards one of the walls of the bed.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No
PCT/EP2005/001950

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
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